

ABSTRACT

Semiconductor devices and methods for fabrication the same are disclosed. An illustrated method of fabricating a semiconductor device comprises: forming a trench on a substrate; forming a gate electrode by depositing and planarizing an oxide layer and polysilicon on the substrate including the trench; forming a gate oxide layer and a polysilicon layer on the substrate; forming source/drain regions by a photo process; and forming a contact plug on at least one of the source/drain regions. By controlling the overlap between the gate and the source/drain regions using a source/drain mask, current control becomes easy and a device sensitive to current control is easily fabricated. Sufficient spaces between the gate and the contact(s) due to the buried type gate make the fabrication processes easy.